REFERENCES 61

[23] Q. Stiévenart, D. Binkley, and C. De Roover, "Dynamic slicing of webassembly binaries," in 39th IEEE International Conference on Software Maintenance and Evolution, IEEE, 2023.

- [24] Q. Stiévenart, D. W. Binkley, and C. De Roover, "Static stack-preserving intra-procedural slicing of webassembly binaries," in *Proceedings of the 44th International Conference on Software Engineering*, ICSE '22, (New York, NY, USA), p. 2031–2042, Association for Computing Machinery, 2022.
- [25] C. Watt, J. Renner, N. Popescu, S. Cauligi, and D. Stefan, "Ct-wasm: Type-driven secure cryptography for the web ecosystem," *Proc. ACM Program. Lang.*, vol. 3, jan 2019.
- [26] M. Musch, C. Wressnegger, M. Johns, and K. Rieck, "New kid on the web: A study on the prevalence of webassembly in the wild," in *Detection of Intrusions and Malware*, and Vulnerability Assessment: 16th International Conference, DIMVA 2019, Gothenburg, Sweden, June 19–20, 2019, Proceedings 16, pp. 23–42, Springer, 2019.
- [27] R. K. Konoth, E. Vineti, V. Moonsamy, M. Lindorfer, C. Kruegel, H. Bos, and G. Vigna, "Minesweeper: An in-depth look into drive-by cryptocurrency mining and its defense," in *Proceedings of the 2018 ACM SIGSAC Conference on Computer and Communications Security*, pp. 1714–1730, 2018.
- [28] A. Romano, Y. Zheng, and W. Wang, "Minerray: Semantics-aware analysis for ever-evolving cryptojacking detection," in *Proceedings of the 35th IEEE/ACM International Conference on Automated Software Engineering*, pp. 1129–1140, 2020.
- [29] F. N. Naseem, A. Aris, L. Babun, E. Tekiner, and A. S. Uluagac, "Minos: A lightweight real-time cryptojacking detection system.," in NDSS, 2021.
- [30] W. Wang, B. Ferrell, X. Xu, K. W. Hamlen, and S. Hao, "Seismic: Secure in-lined script monitors for interrupting cryptojacks," in *Computer Security:* 23rd European Symposium on Research in Computer Security, ESORICS 2018, Barcelona, Spain, September 3-7, 2018, Proceedings, Part II 23, pp. 122–142, Springer, 2018.
- [31] J. D. P. Rodriguez and J. Posegga, "Rapid: Resource and api-based detection against in-browser miners," in *Proceedings of the 34th Annual Computer Security Applications Conference*, pp. 313–326, 2018.
- [32] A. Kharraz, Z. Ma, P. Murley, C. Lever, J. Mason, A. Miller, N. Borisov, M. Antonakakis, and M. Bailey, "Outguard: Detecting in-browser covert cryptocurrency mining in the wild," in *The World Wide Web Conference*, pp. 840–852, 2019.

62 REFERENCES

[33] D. Genkin, L. Pachmanov, E. Tromer, and Y. Yarom, "Drive-by key-extraction cache attacks from portable code," *IACR Cryptol. ePrint Arch.*, vol. 2018, p. 119, 2018.

- [34] G. Maisuradze and C. Rossow, "Ret2spec: Speculative execution using return stack buffers," in *Proceedings of the 2018 ACM SIGSAC Conference on Computer and Communications Security*, CCS '18, (New York, NY, USA), p. 2109–2122, Association for Computing Machinery, 2018.
- [35] T. Rokicki, C. Maurice, M. Botvinnik, and Y. Oren, "Port contention goes portable: Port contention side channels in web browsers," in *Proceedings* of the 2022 ACM on Asia Conference on Computer and Communications Security, ASIA CCS '22, (New York, NY, USA), p. 1182–1194, Association for Computing Machinery, 2022.
- [36] Q. Stiévenart, C. De Roover, and M. Ghafari, "Security risks of porting c programs to webassembly," in *Proceedings of the 37th ACM/SIGAPP Symposium on Applied Computing*, SAC '22, (New York, NY, USA), p. 1713–1722, Association for Computing Machinery, 2022.
- [37] B. Cox, D. Evans, A. Filipi, J. Rowanhill, W. Hu, J. Davidson, J. Knight, A. Nguyen-Tuong, and J. Hiser, "N-variant systems: a secretless framework for security through diversity," in *Proc. of USENIX Security Symposium*, USENIX-SS'06, 2006.
- [38] J. Cabrera Arteaga, O. Floros, O. Vera Perez, B. Baudry, and M. Monperrus, "Crow: code diversification for webassembly," in *MADWeb*, *NDSS* 2021, 2021.
- $[39]\,$  J. Cabrera Arteaga, "Artificial software diversification for webassembly," 2022. QC 20220909.
- [40] M. Jacob, M. H. Jakubowski, P. Naldurg, C. W. N. Saw, and R. Venkatesan, "The superdiversifier: Peephole individualization for software protection," in *International Workshop on Security*, pp. 100–120, Springer, 2008.
- [41] R. Sasnauskas, Y. Chen, P. Collingbourne, J. Ketema, G. Lup, J. Taneja, and J. Regehr, "Souper: A Synthesizing Superoptimizer," arXiv preprint 1711.04422, 2017.
- [42] J. Cabrera Arteaga, P. Laperdrix, M. Monperrus, and B. Baudry, "Multi-Variant Execution at the Edge," arXiv e-prints, p. arXiv:2108.08125, Aug. 2021.
- [43] S. Bhatkar, D. C. DuVarney, and R. Sekar, "Address obfuscation: an efficient approach to combat a board range of memory error exploits," in *Proceedings of the USENIX Security Symposium*, 2003.